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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,632	12/19/2000	Brian Scott Cook	135774	5579

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EXAMINER

DENNISON, JERRY B

ART UNIT PAPER NUMBER

2143

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/741,632

Applicant(s)

COOK ET AL.

Examiner

J. Bret Dennison

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Action is in response to Amendment of Application Number 09/741632 received on 16 August 2004.
2. Claims 1-20 are presented for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6, 7, 11-13, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Thrysoe (U.S. Patent Number 6,574,238) hereinafter referred to by Thrysoe.

3. Regarding claims 1, 11, and 13, Thrysoe discloses a method of transparently transporting frame information across a network, comprising:

placing payload information from a first frame into payload locations of a second frame, the first frame associated with a first network having a first protocol, the second frame associated with a second network having a second protocol (Thrysoe, col. 1, lines

35-50, Thrysoe discloses data frames being exchanged between local area networks using an inter-switch link, where the inter-switch link receives encapsulated native LAN data frames, where the payload segment in the received data frame is an encapsulated frame);

placing overhead information from the first frame into payload locations of a payload for the second frame (Thrysoe, col. 2, lines 12-17, Thrysoe teaches receiving from a local area network a data frame where the payload segment is an encapsulated frame).

4. Regarding claim 2, Thrysoe teaches the limitations, substantially as claimed, as described in claim 1, including wherein the payload information of the first frame is mapped exactly into corresponding payload locations of the second frame (Thrysoe, col. 2, lines 12-17, Thrysoe teaches receiving from a local area network a data frame where the payload segment is an encapsulated frame, col. 5, lines 48-50, Thrysoe teaches passing a consistent ISL frame format, which includes mapping payload information into corresponding payload locations.).

5. Regarding claims 3 and 12, Thrysoe teaches the limitations, substantially as claimed, as described in claims 1 and 11, including wherein the overhead information of the first frame is placed into fixed stuff locations of the payload of the second frame (Thrysoe, col. 5, lines 58-63, Thrysoe teaches modifying frames to conform to the frame

format by extracting overhead information from the first frame and moving it so that it precedes the final CRC field in the second frame).

6. Regarding claim 6, Thrysoe teaches the limitations, substantially as claimed, as described in claim 1, including wherein path overhead locations of the second frame include overhead information of the first frame (Thrysoe, col. 5, lines 58-63, Thrysoe teaches placing modified header information from the first frame into the header of the second frame).

7. Regarding claim 7, Thrysoe teaches the limitations, substantially as claimed, as described in claim 1, including sending the second frame across the second network (Thrysoe, col. 1, lines 35-40, Thrysoe discloses an inter-switch link which is used to connect networks and send data from a first network to a second network, see Fig. 1).

8. Regarding claim 15, Thrysoe teaches the limitations, substantially as claimed, as described in claim 11, including wherein the node is operable to place an entire header and payload portions of the first frame structure into the payload portion of the second frame structure (Thrysoe, Thrysoe, col. 2, lines 12-17, Thrysoe teaches receiving from a local area network a data frame where the payload segment is an encapsulated frame, col. 5, line 45 through col. 6, line 10, Thrysoe teaches modifying the header data and placing it along with the payload portions into the payload portion of the new frame).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thrysoe in view of Upp et al. (U.S. Patent Number 4,967,405) hereinafter referred to by Upp.

9. Regarding claims 4, 5 and 14, Thrysoe teaches the limitations, substantially as claimed, as described in claims 1 and 11, including wherein a consistent frame format is used by modifying overhead bytes. However, Thrysoe does not explicitly state wherein redundant overhead bytes are discarded. In an analogous art of processing signals in SONET format, Upp discloses zeroing out the overhead bytes (Upp, col. 3, lines 60-67).

Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Thrysoe with Upp to provide a system that transports a variety of native frame types including SONET format for the benefit of providing cross connection of high-rate digital carrier signals with other high-rate digital signal carriers (Upp, col. 2, lines 19-25).

Claims 8-10, 16, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thrysoe in view of Parruck et al. (U.S. Patent Number 5,257,261) hereinafter referred to by Parruck.

10. Regarding claim 8, Thrysoe teaches the limitations, substantially as claimed, as described in claim 7, except receiving the second frame at a departure node of the second network;

- extracting payload information for the second frame from the second frame;
- extracting overhead information for the first frame;
- reconstructing the first frame in the departure node from the extracted payload and overhead information.

In an analogous art of processing signals in SONET format, Parruck discloses receiving a frame signal (Parruck, col. 5, lines 35-40), extracting payload information from the frame (Parruck, col. 6, lines 8-15), extracting overhead information (Parruck, col. 6, lines 40-45), and reconstructing the frame from the extracted payload and overhead information (Parruck, col. 6, lines 15-20, lines 37-45).

Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Thrysoe with Parruck to provide transmission of signals between networks by recombination of higher level signals after they have been broken into a plurality of constituent components (Parruck, col. 1, lines 55-67).

11. Regarding claims 9 and 10, Thrysoe and Parruck teach the limitations, substantially as claimed, as described in claim 8, including transferring the first frame to a third remote network, the third network having the first protocol (Thrysoe, col. 1, lines 35-40, Thrysoe discloses an inter-switch link which is used to connect networks to transfer data, see Fig. 1). Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Thrysoe with Parruck to provide transmission of signals between networks by recombination of higher level signals after they have been broken into a plurality of constituent components (Parruck, col. 1, lines 55-67).

12. Regarding claims 16 and 20, Thrysoe discloses a method of transparently transporting frame information across a network, comprising:

placing payload information from a first frame into payload locations of a second frame, the first frame associated with a first network having a first protocol, the second frame associated with a second network having a second protocol (Thrysoe, col. 35-50, Thrysoe teaches forming a modified frame from the payload of a received frame);

placing overhead information from the first frame into payload locations of a payload for the second frame (Thrysoe, col. 5, lines 58-63, Thrysoe teaches modifying frames to conform to the frame format by moving overhead information so that they precede the final CRC field,).

However, Thrysoe does not disclose receiving a first STS-3 telecommunications signal carrying three STS-1 telecommunications signals, each including header and payload information.

In an analogous art, Parruck discloses the concatenation of STS-1 signals to form an STS-3 signal (Parruck, col. 3, lines 15-25)

Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Thrysoe with Parruck to provide transmission of signals between networks by recombination of higher level signals after they have been broken into a plurality of constituent components (Parruck, col. 1, lines 55-67).

13. Regarding claim 17, Thrysoe and Parruck teach the limitations, substantially as claimed, as described in claim 16, including wherein the path overhead locations of the second frame structure includes path overhead for the second STS-3 telecommunications signal, path overhead for the first STS-3 telecommunications signal, and overhead bytes from the header portion of the first frame structure. (Thrysoe, col. 5, lines 58-63, Thrysoe teaches modifying frames to conform to the frame format by extracting overhead information from the first frame and moving it so that it precedes the final CRC field in the second frame).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thrysoe and Parruck as applied to claim 16 above, and further in view of Upp et al. (U.S. Patent Number 4,967,405) hereinafter referred to by Upp.

14. Regarding claim 18, Thrysoe and Parruck teach the limitations, substantially as claimed, as described in claim 16, including wherein a consistent frame format is used by modifying overhead bytes. However, Thrysoe and Parruck do not explicitly state discarding overhead bytes of the header portion of the first frame structure that are redundant between the three STS-1 telecommunications signals and that are identical with overhead bytes for the second STS-3 telecommunications signal. In an analogous art of processing signals in SONET format, Upp discloses zeroing out the overhead bytes (Upp, col. 3, lines 60-67).

Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Thrysoe and Parruck with Upp to provide a system that transports a variety of native frame types including SONET format for the benefit of providing cross connection of high-rate digital carrier signals with other high-rate digital signal carriers (Upp, col. 2, lines 19-25).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thrysoe in view of Parruck as applied to claim 16 above, and further in view of Fedders et al. (U.S. Patent Number 6,603,776).

15. Regarding claim 19, Thrysoe and Parruck teach the limitations, substantially as claimed, as described in claim 16. However, Thrysoe and Parruck do not explicitly state wherein the fixed stuff byte locations are in columns 30 and 59 of the second frame

structure. In an analogous art, Fedders discloses a system for efficient broadband data payload conversion wherein the stuff bytes are written into columns 30 and 59 (Fedders, col. 5, lines 10-16). Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to combine Thrysoe and Parruck with Fedders to efficiently convert broadband data between two sets of data formats (Fedders, col. 1, lines 14-15)

Response to Amendment

Applicant's arguments and amendments filed on 16 August 2004 have been carefully considered but they are not deemed fully persuasive.

Applicant's arguments with respect to claims 1-20 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "describing mapping payload or overhead information from a first frame associated with a first network having a first protocol to a second frame associated with a second network having a second protocol") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding claims 1 and 11, Applicant's arguments include the failure of previously applied art to expressly disclose the teachings of "describing mapping payload or overhead information from a first frame associated with a first network having a first protocol to a second frame associated with a second network having a second protocol" [see Applicant's Response, filed 16 August 2004, page 8 of 11]. Claims 1 and 11 do not include "mapping payload or overhead information." Claim 1 recites "placing payload (and overhead) information from a first frame into payload locations of a second frame." Claim 11 recites "the node operable to place the payload (and header) portion of the first frame structure into a payload portion of a second frame structure." It is evident from the mappings found in the above rejection that Thrysoe discloses the teaching of receiving a data frame from a first network, where the payload segment of the data frame is an encapsulated frame from a first local area network. The definition of encapsulation is as follows: The technique used by layered protocols in which a layer adds header information to the protocol data unit (PDU) from the layer above. As an example, in Internet terminology, a packet would contain a header from the physical layer, followed by a header from the network layer (IP), followed by a header from the transport layer (TCP), followed by the application protocol data. Therefore, the header portion and the payload portion of the data frame are both placed into the payload portion of the second frame. Further, it is clear from the numerous teachings (previously and currently cited) that the provision for using "encapsulation" was widely implemented in the networking art. Examiner recommends that Applicant review new cited art (ex: Hurren et al. U.S. Patent Number 6,788,681, col. 3).

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Regarding claims 4, 5, and 14, Applicant's arguments include the failure of previously applied art to expressly disclose the teachings of "overhead bytes that are identical between the first network and the second network are not placed into the second frame or wherein redundant overhead bytes are discarded." It is evident from the mappings found in the above rejection that Thrysoe discloses the teaching of removing overhead bytes and sending the remaining signal before the terminator/originator inserts path and transport overhead bytes. Further, it is clear from the numerous teachings (previously and currently cited) that the provision for using "removing unnecessary overhead" was widely implemented in the networking art. Examiner recommends that Applicant review new cited art (ex: Stewart et al. U.S. Patent Number 6,389,036, col. 6, lines 55-67).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Regarding claim 16, Applicant's arguments include the failure of previously applied art to expressly disclose the teachings of "header portions of the first frame structure are mapped into payload locations of the second frame structure." However, the combination of Thrysoe and Parruck teach header portions of the first frame structure are mapped into payload locations of the second frame structure.

Applicant only claims placing payload and overhead information of a first data frame into the payload portion of a second data frame to be transmitted between

networks. By Thrysoe including receiving an encapsulated packet from a first network and to be sent to a second network, the claimed invention is taught by the prior art of reference.

1. Thus, Applicant's arguments drawn toward distinction of the claimed invention and the prior art teachings on this point are not considered persuasive. It is also clear to the Examiner that Thrysoe and Parruck clearly teach the independent claims of the Applicant's claimed invention.

2. Furthermore, as it is Applicant's right to continue to claim as broadly as possible their invention, it is also the Examiner's right to continue to interpret the claim language as broadly as possible. It is the Examiner's position that the detailed functionality that allows for Applicant's invention to overcome the prior art used in the rejection, fails to differentiate in detail how these features are unique [see Spec XXXXXXXXX]. As it is extremely well known in the networking art as already shown by Thrysoe as well as other prior arts of records disclosed placing data frames in the payload of a second data frame to be transmitted across networks is taught as well as other claimed features of Applicant's invention. By the rejection above, the applicant must submit amendments to the claims in order to distinguish over the prior art use in the rejection that discloses different features of Applicant's claimed invention.

3. It is the Examiner's position that Applicant has not yet submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art.

4. Failure for Applicant to significantly narrow definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response and reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

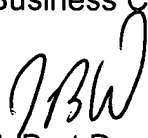
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Bret Dennison whose telephone number is (571)272-3910. The examiner can normally be reached on M-F 8:30am-5pm.

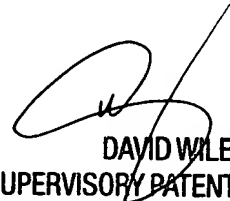
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (703) 308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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